

REMARKS

The present application has been reviewed in light of the Non-Final Office Action mailed September 13, 2010. Claims 1, 3, 9, 16, 17 and 20-24 are currently pending. By the present amendment, Claim 1 has been amended and Claims 23 and 24 have been added. Reconsideration of this application is earnestly sought.

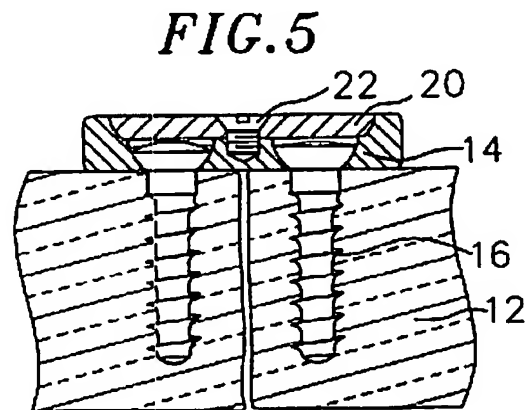
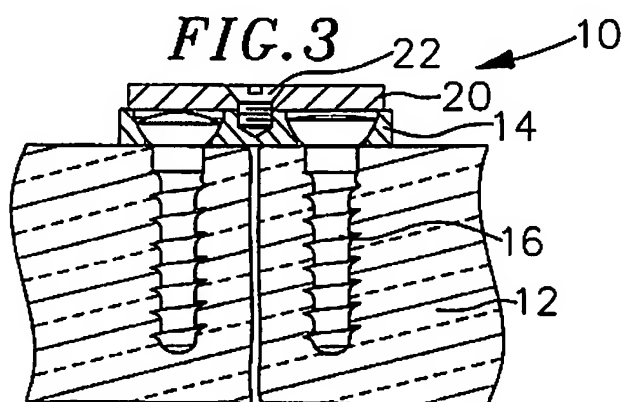
Claims 1, 3, 9 and 20-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,235,034 to Bray (hereinafter “Bray”) in view of U.S. Patent No. 5,139,499 to Small et al. (hereinafter “Small”). Applicants respectfully submit that independent Claims 1 and 20 are patentable over Bray in view of Small because Bray taken in any proper combination with Small fails to disclose the invention as claimed in independent Claims 1 and 20.

As the Board of Patent Appeals and Interferences (“BPAI”) reiterated in In re Wada and Murphy, an obviousness rejection under § 103 requires a suggestion of *all limitations in a claim*. Appeal 2007-3733 (B.P.A.I. Jan. 2008) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974); emphasis added). If the references, alone or in combination, do not teach or suggest each and every element of the claim, then the references cannot support a rejection under § 103. See Id.

Claim 1 recites an encapsulation device for the repair of an articular cartilage defect comprising, *inter alia*, “a body having a generally annular frame supporting therein a solid shell-like cover portion ... said cover portion being integrally formed with said frame portion” and “an elongated leg structure comprising a plurality of elongated leg members ... each of said leg members being provided with a central channel therein, each of the channels opening on a proximal side of said frame and extending substantially the length of each of said leg members to a point proximate a closed distal end thereof, wherein at least one of said leg members is provided at a distal end thereof with an end portion enlarged beyond a periphery of said leg

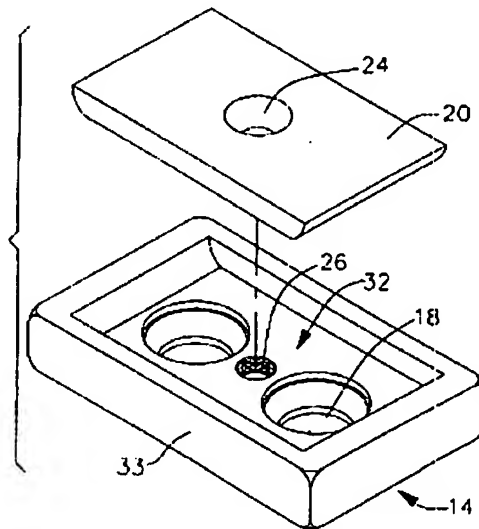
member at a proximal end of the end portion and a generally crested end portion at a distal end of the end portion.” Claim 20 recites, a method for effecting a repair to an articular cartilage defect, the method including, *inter alia*, providing an encapsulation device including, *inter alia*, a body and “an elongated leg structure comprising a plurality of elongated leg members ... each leg provided with a central channel therein, the channel being open on a proximal side of the frame member and extending substantially the length of each of the leg members to a point proximate a closed distal end thereof... receiving a distal end of an insertion tool within the central channels of each of the leg members, and driving each leg of the leg structure of the encapsulation device into the hole provided therefore in the bone to bring a distal surface of the bowed encapsulation device body into adjacency with the bone.”

With reference to FIGS. 3 and 4 of Bray, reproduced below, Bray discloses a bone plate 10 including a base plate 14, at least two bone screws 16 and at least one bone screw locking means or retaining plate 20. Retaining plate 20 is fixedly attached to base plate 14 by a set screw 22. Retaining plate 20 is of a shape and size such that it covers at least a part of at least one bone screw 16 so that bone screws 16 cannot back out from bone 12 once screwed in through base plate 14.



With reference to FIG. 6A of Bray, reproduced below, in one embodiment, Bray discloses a base plate 14 including a recess 32 defined by a raised structure 33 that forms a boundary around at least a portion of the retaining plate area.

FIG. 6A



As noted by the Examiner, Bray fails to teach that the leg structures are generally conical or that the leg structures have a central channel that extends substantially the length of each leg. Bray further fails to teach or disclose a cover integral with the frame and legs having a portion at the distal end of the legs that are enlarged beyond a periphery of the leg member.

The Examiner relies on Small to teach an anchor having a central channel configured for engaging a delivery device. With reference to Figs. 1 and 10, reproduced below, Small discloses a screw 20 including a thread extending the length thereof. Screw 20 includes a blind axial bore 26 which extends from a proximal end of screw 20 to a central portion of screw 20 and is configured to receive a distal end 66 of a driver 50. Bore 26 enables screw 20 to provide positive rotational engagement between screw 20 and driver 50. Screw 20 is configured to be rotationally received within a gap 106 formed between a bone plug 100 and the wall of a hole 102. In an

alternative embodiment, screw 120 is configured to be received in a pilot hole 400 (Fig. 13 of Small). Preferably screw 20 does not comprise a distinct head having a diameter which is greater than the diameter of the shaft of screw 20.

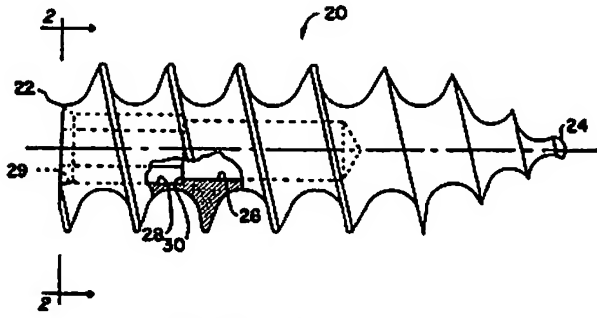


Fig. 1

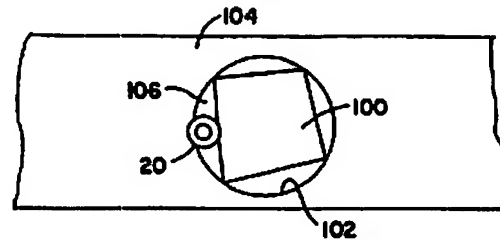


Fig. 10

As discussed above, and contrary to the Examiner's assertion, the retaining plate 20 of the bone plate 10 of Bray is not integrally formed with base plate 14, as recited in Claim 1. Instead, as discussed above, retaining plate 20 is affixed to base plate 14 using a set screw 22. There is no teaching, suggestion or motivation to form retaining plate 20 integrally with base plate 14. In fact, Bray teaches away from any such modification, as bone screws 16 need to be received through recess 32 of base plate 14 prior to affixing retaining plate 20 within base plate 14 such that retaining plate 20 may operate as intended to prevent the backing out of bone screws 16. Additionally, bone screws 16 do not include an end portion that is enlarged beyond a periphery of the screw body, as also recited in Claim 1. Instead, each bone screw 16 includes a screw body having a thread that extends along the entire length of the screw body and decreases in diameter towards the distal end of the screw. Bray's bone screw 16 does not include an end portion that is enlarged beyond a periphery of the screw body.

Also, contrary to the Examiner's assertion, it would not have been obvious to modify the screw of the bone plate of Bray to include a blind axial bore as disclosed in the screw of Small.

MPEP § 2143.01(VI) states that “[i]f the proposed modification of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claim *prima facie* “obvious.” Similarly, MPEP § 2143(V) states that “[i]f proposed modification would render the prior art being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” As discussed above, the screw of Small acts as a wedge to secure a bone plug within a hole and, preferably, does not include a head. Since the screw used to secure the bone plate of Bray requires a head to engage the base plate, if one were to modify Bray’s screw in view of Small as suggested by the Examiner by substituting an axial bore for the screw head, Bray’s headless screw would not function as intended by Bray. Additionally, modifying the bone screw of Bray to include a channel as disclosed in Small would compromising the integrity of the screw and its engagement with the base plate. Thus, the combination of Bray and Small proposed by the Examiner would not be sufficient to render Claims 1 and 20 *prima facie* obvious.

Even if the screw of Small were properly combinable with the bone plate of Bray, which Applicants maintain it is not, Bray and Small, alone or in combination, fail to disclose the method of Claim 20. As discussed above, the base plate of the bone plate of Bray is secured to bone using bone screws. Implanting of the bone plate requires placing the base plate adjacent a bone and securing the plate to the bone by individually inserting bone screws therethrough. In this manner, Bray fails to disclose a method including “receiving a distal end of an insertion tool within the central channels of each of the leg members and driving each leg of the leg structure of the encapsulation device into the hole provided therefore in the bone to bring a distal surface of the bowed encapsulation device body into adjacency with the bone.”

For at least these reasons, Applicants submit that Claims 1 and 20 are patentable over Bray and Small, taken alone or in combination, are in condition for allowance. Accordingly Applicants also submit that the rejection of Claims 1 and 20 under 35 U.S.C. § 103(a) should be withdrawn.

Since Claims 3 and 9 depend from independent Claim 1 and Claims 21 and 22 depend from Claim 20, and each contains all the limitations of Claim 1 and 20, respectively, for at least the reasons discussed above with respect to Claims 1 and 20, Applicants submit that each of Claims 3, 9, 21 and 22 are also in condition for allowance.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bray in view of Small, as applied to Claim 1, and further in view of U.S. Patent No. 5,634,926 to Jobe (hereinafter "Jobe"). The Examiner relies on Jobe as disclosing the use of a bioabsorbable material. With reference to FIG. 1 of Jobe reproduced below, Jobe discloses a bone fixation device 10 for holding two bone sections 6, 7 in a desired position about a fracture line. Jobe does not provide any disclosure, that when taken in any proper combination with Bray and Small cures the deficiencies of Bray and Small as discussed above with respect to Claim 1. Since Claim 16 depends from independent Claim 1, and contains all the limitations of Claim 1, for at least the reasons discussed above with respect to Claim 1, Applicant submits that Claim 16 is also in condition for allowance.



Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bray in view of Small, as applied to Claim 1, and further in view of U.S. Patent No. 6,620,163 to Michelson (hereinafter "Michelson"). The Examiner relies on Michelson as disclosing the use of cell growth material to make the device. With reference to FIG. 1 of Michelson reproduced below, Michelson discloses a multiple locking anterior cervical locking plate 2. Michelson does not provide any disclosure, that when taken in any proper combination with Bray and Small cures the deficiencies of Bray and Small as discussed above with respect to Claim 1. Since Claim 17 depends from independent Claim 1, and contains all the limitations of Claim 1, for at least the reasons discussed above with respect to Claim 1, Applicant submits that Claim 17 is also in condition for allowance.



As noted above, by the present amendment, applicants have added Claims 23 and 24 which recite that “each of the leg member is integrally formed with the body. Claim 23 depends from independent Claim 1 and Claim 24 depends from independent Claim 20. Since each of Claims 23 and 24 contains all the limitations of Claims 1 and 20, respectively, for at least the reasons discussed above with respect to Claims 1 and 20, *inter alia*, Applicants submit that Claims 23 and 24 are also in condition for allowance.

In view of the foregoing, this case is believed to be in condition for allowance, such early and favorable action is being earnestly solicited. Should the Examiner believe that a telephone interview may facilitate resolution of any outstanding issues, the Examiner is respectfully requested to telephone Applicants’ undersigned attorney at the number indicated below. Early and favorable consideration of the presently amended application is earnestly solicited.

Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. §1.16 and/or 1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 21-0550. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 21-0550 therefor.

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